

REMARKS

Claims 1-30 are pending. By this amendment, claims 1, 10, 21 and 26 have been amended. In the Office Action dated June 16, 2008, claims 8 and 19 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. Claims 1-30 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Publication No. 2004/0044833 to Ryan ("Ryan") in view of U.S. Patent No. 5,502,621 to Schumacher et al. ("Schumacher"). Claims 1-30 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 37 of copending U.S. Patent Application No. 11/417,389 to Janzen ("Janzen") in view of Ryan and Schumacher. Claims 1-20 and 22-30 were further rejected as being obvious over claim 37 of Janzen in view of Ryan and Schumacher.

The Applicant would like to thank the Examiner for the telephone interview conducted on September 22, 2008 and the follow-up interview conducted on October 6, 2008. During the interviews the Applicant and the Examiner discussed the differences between the cited references and the present application. The Examiner agreed that the Ryan reference discloses individual busses being provided between the memory hub and each memory device.

With this response, the Applicant submits a 37 C.F.R. §1.131 declaration from chief patent counsel, Russell D. Slifer, of the assignee, Micron Technology Inc. The declaration is being filed by the assignee because the inventor, Jeffrey Janzen, is deceased. MPEP 715.04 (States that the assignee may file the declaration when it is not possible to produce a declaration from the inventor). Although the Applicant respectfully disagrees with the merits of the Examiner's rejections of the pending claims over the cited references, the Applicant reserves further comment on the merits in view of the enclosed declaration. The facts contained in the declaration show that: (1) the claimed invention was conceived by the Applicant prior to the March 4, 2004 publication date of U.S. Publication No. 2004/0044833 to Ryan, and (2) the claimed invention was diligently reduced to practice.

Pursuant to 37 C.F.R. §1.131(b), the Applicant respectfully submits that it has demonstrated facts sufficient to remove the Ryan reference from being a 35 U.S.C. § 102(a) reference. (MPEP 715). In particular, the Applicant had possession of the whole invention claimed prior to March 4, 2004, the publication date of the Ryan reference. Possession of the whole invention claimed is evident by the fact that the inventor stated he had reviewed the

application and was ready to sign the appropriate documents for filing the application on February 28, 2004, five days before the Ryan reference published. (*See*, 131 Declaration 2-4, 6). Additionally, the Applicant was diligent just prior to the publication date of the Ryan reference until the date the present application was filed, April 8, 2004. (*See*, 131 Declaration 4-14). In particular, the Applicant was diligent from February 28, 2004 until the application was filed on April 8, 2008. Although there was confusion regarding signed documents, all parties involved were quick to recognize the confusion and resolve it. (*See*, 131 Declaration 4-14). Once the documents were provided to the attorney, the application was filed within five business days. The MPEP states that an attorney taking six days to prepare and file an application is acceptable. (MPEP 2138.06). All acts relied upon to establish the date prior to the Ryan reference were carried out in the United States.

From the above, it can be seen that the Ryan reference is a 102(e) reference, rather than a 102(a) reference. As a 102(e) reference, the Ryan reference is not considered prior art under a 35 U.S.C. § 103(a) rejection. In particular, under 35 U.S.C. § 103(c) “[s]ubject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.” As discussed above, the Ryan reference qualifies as prior art under section 102(e). Both the Ryan reference and the present application are assigned to the same assignee, namely Micron Technology, Inc. The undersigned states as follows regarding the common ownership of the Ryan patent application and the invention claimed in the present patent application:

Statement Regarding Common Ownership

The Ryan patent application and the invention claimed in the present patent application were, at the time the invention claimed in the present application was made, subject to an obligation of assignment to Micron Technology, Inc., which is the assignee of the present application and the Ryan patent application.

Accordingly, the Ryan reference may not be applied as prior art under section 103(a) against the claims of the present application. *See also* MPEP § 706.02(I)(1)-(2).

In addition, the claims are patentable over the Ryan reference. The embodiments disclosed in the specification will now be discussed in comparison to the cited references. Of course, the discussion of the disclosed embodiments, and the discussion of the differences between the disclosed embodiments and the cited references, do not define the scope or interpretation of any of the claims. Instead, such discussed differences merely help the Examiner appreciate important claim distinctions discussed thereafter.

The present application is directed to solving the problem of skew and cross talk associated with signals that are being transmitted between memory devices and a memory hub. The application is interested in reducing skew and cross talk while at the same time creating smaller and more dense memory modules. In one embodiment, the control-address busses of two memory devices share a common path, where the two memory devices are from different pairs. This allows for a smaller memory module, shorter paths, while preventing cross talk. For instance, the shared control-address busses are of roughly the same length, and each memory device has control-address pins located at the edge that is adjacent to the other memory device from the different pair.

The Ryan reference discloses pairs of memory devices positioned around a memory hub. Separate busses 230-244 couple each memory device to the memory hub. The Ryan reference teaches using separate busses to provide the shortest possible path between each memory device and the memory hub. "Application of command, address and data signals to the memory devices 212-226 is done at individual ports (not shown for the sake of clarity) on the memory hub 208 to which the individual busses in the bus system 230-244 are coupled." (para. 22). The Ryan reference does not disclose or fairly suggest that any of the two memory devices on the memory module share a command-address bus.

The Schumacher reference discloses a surface mount board having two memory controller chips mounted 180 degrees from each other. The Schumacher reference fails to make up for what is not disclosed in the Ryan reference.

Turning now to the claims, the patentably distinct differences between the cited references and the claim language will be specifically pointed out. Claims 1, 10, and 21 recite, in part, "a plurality of command-address busses, each command-address bus coupled to a port on

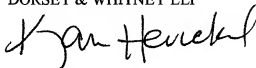
the memory hub and at least one of the pins associated with the second functional group of signals on each of the at least two memory devices, the two memory devices being from a different pair.” Neither the Ryan reference nor the Schumacher references, in combination or by themselves, discloses or fairly suggests this limitation. As discussed above, the Ryan reference discloses that each memory device uses its own bus system for communicating with the memory hub. In addition, it teaches away from using a common path for two memory devices by stating that the individual busses allow for the shortest path possible between each memory device and the memory hub. See, para. 25. The Schumacher reference fails to make up for this limitation. Therefore claims 1, 10, and 21 are allowable over the Ryan and the Schumacher references.

Claim 26 recites, in part, “coupling control-address signals between a port on the memory hub and two memory devices via a common path, the two memory devices being from different pairs.” Neither the Ryan reference nor the Schumacher reference, in combination or by themselves, discloses or fairly suggests the above limitation. As stated above, the Ryan reference discloses that the control-address signals coupled between the memory hub and each memory device should have their own path so that the path may be the shortest path possible. The Schumacher reference fails to make up for this limitation. Therefore claim 26 is allowable over the Ryan and the Schumacher references.

Claims depending from claim 1, 10, 21, and 26 are also allowable due to depending from an allowable base claim and further in view of the additional limitations recited in the dependent claims.

All of the claims remaining in the application are therefore allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,
DORSEY & WHITNEY LLP



Karen Henckel
Registration No. 58,371
Telephone No. (206) 903-2399

KH:sp

DORSEY & WHITNEY LLP
1420 Fifth Avenue, Suite 3400
Seattle, Washington 98101-4010
(206) 903-8800 (telephone)
(206) 903-8820 (fax)

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